

IN THE CLAIMS:

Claims 1 - 81 (canceled)

Claim 82. (New)

82. An electronic label reading system including:

at least one information bearing electronic coded label  
including a label antenna;

an interrogator including an interrogator antenna;

a magnetic field coupling link containing a transmitter  
coil and a receiver coil for communication between the  
interrogator and the label;

wherein the coupling link is arranged such that it  
operates in the near field of said transmitter coil and  
wherein substantially none or at most a minority of the  
magnetic flux which excites said receiver coil also links  
said transmitter coil.

Claim 83. (New)

83. An electronic label reading system as claimed in claim  
82 wherein said interrogator includes said transmitter coil  
and said label includes said receiver coil.

Claim 84. (new)

84. An electronic label reading system as claimed in claim 82 wherein said label includes said transmitter coil and said interrogator includes said receiver coil.

Claim 85. (New)

85. An electronic label reading system as claimed in claim 82 wherein said transmitter or receiver coil contains a magnetic core.

Claim 86. (New)

86. An electronic label reading system as in claim 82 wherein said label antenna operated in proximity to a metal object and the metal object provides substantial reduction of the amount of magnetic field that would reach the receiver coil from the transmitter coil in relation to the magnetic field which would reach said receiver coil if the metal object were not present.

Claim 87. (New)

87. An electronic label reading system as claimed in claim 82 wherein said coupling link is used for signaling from the interrogator to the label.

Claim 88. (New)

88. An electronic label reading system as claimed in claim 82 wherein said coupling link is used for signaling from the label to the interrogator.

Claim 89. (New)

89. An electronic label reading system as claimed in claim 82 wherein the interrogator provides power to the label to generate a reply from the label.

Claim 90. (New)

90. An electronic label reading system as claimed in claim 82 wherein the label generates replies intermittently.

Claim 91. (New)

91. An electronic label reading system as claimed in claim 90 wherein power for the label comes from power supplied by the transmitter during the period of the label giving a reply.

Claim 92. (New)

92. An electronic label reading system as claimed in claim 87 wherein the label may be read while a sheet of metal is interposed between the interrogator and the label.

Claim 93. (New)

93. An electronic label reading system as claimed in claim 92 wherein said sheet of metal is of substantial extent.

Claim 94. (New)

94. An electronic label reading system as claimed in claim 92 coil wherein the transmitter and receiver coils have parallel axes.

Claim 95. (New)

95. An electronic label reading system as claimed in claim 86 coil wherein the label coil is excited by a magnetic field created by surface currents on metal of an object carrying said label.

Claim 96. (New)

96. An electronic label reading system as claimed in claim 86 wherein currents are induced on one side of the metal object by said magnetic field, and wherein a pathway on said metal object allows those currents to pass to the other side of said metal object, and wherein said label is placed close to the currents on said other side of said metal object so that said label interacts with the magnetic field which

accompanies said currents on said other side of said metal object.

Claim 97. (New)

97. An electronic label reading system as claimed in claim 96 wherein said pathway is provided by holes in said metal object.

Claim 98. (New)

98. An electronic label reading system as claimed in claim 96 wherein said currents induced on one side of said metal object travel toward an edge of said metal object.

Claim 99. (New)

99. An electronic label reading system as claimed in claim 97 wherein currents change direction when they reach said other side of said metal object.

Claim 100. (New)

100. An electronic label reading system as claimed in claim 97 wherein edges of the holes in said metal are perpendicular to the direction of said induced current.

Claim 101. (New)

101. An electronic label reading system as claimed in claim 97 wherein said holes are extended in the direction of a magnetic field created by said magnetic field creating antenna.

Claim 102. (New)

102. An electronic label reading system as claimed in claim 97 wherein said holes are a natural part of said object.

Claim 103. (New)

103. An electronic label reading system as claimed in claim 97 wherein said holes are added to said object.

Claim 104. (New)

104. An electronic label reading system as claimed in claim 96 wherein conduction current on said metal object does not flow in closed paths.

Claim 105. (New)

105. An electronic label reading system as claimed in claim 104 wherein the path of currents which flow on said metal object is completed by a displacement current.

Claim 106. (New)

106. An electronic label reading system as claimed in claim 84 wherein said label is placed in a slot in the metal object.

Claim 107. (New)

107. An electronic label reading system as claimed in claim 106 wherein the length of said slot, in the direction perpendicular to the path of currents in the region of the slot, is significantly greater than the length of the label coil or its ferrite core in that direction.

Claim 108. (New)

108. An electronic label reading system as claimed in claim 106 wherein the whole of said label is inside the main outline of said metal object.

Claim 109. (New)

109. An electronic label reading system as claimed in claim 84 wherein the label coil is resonant in its operating frequency band.

Claim 110. (New)

110. An electronic label reading system as claimed in claim 109 wherein the resonant frequency is adjusted for proximity of the label to the metal of the object carrying the label.

Claim 111. (New)

111. An electronic label reading system as claimed in claim 106 wherein the object being labelled is an airline cargo pallet, and said label is locked in position by employing slots already made in said pallet for the purpose of cargo lock down.

Claim 112. (New)

112. An electronic label reading system as claimed in claim 111 wherein barbs on said label lock it in place in a re-entrant slot in the pallet.

Claim 113. (New)

113. An electronic label reading system as claimed in claim 111 wherein an interrogator antenna is placed parallel to and between rollers of a conveyor system.



Claim 114. (New)

114. An electronic label reading system as claimed in claim 113 wherein the rollers have a non-conducting surface or non-conducting bearings.

Claim 115. (New)

115. A method of obtaining information from an electronic label in proximity to a metal object, said label containing a label antenna, said method including the steps of:

providing an interrogator containing an interrogator antenna;

providing a magnetic field coupling link containing a transmitter coil and a receiver coil for communication between the interrogator and the label; and

arranging said coupling link such that it operates in the near field of said transmitter coil and wherein substantially none or at most a minority of the magnetic flux which excites said receiver coil also links said transmitter coil.

Claim 116. (New)

116. A method as claimed in claim 115 wherein said interrogator includes said transmitter coil and said label includes said receiver coil.

Claim 117. (New)

117. A method as claimed in claim 115 wherein said label includes said transmitter coil and said interrogator includes said receiver coil.

Claim 118. (New)

118. An electronic label reading system as claimed in claim 82 wherein said interrogator transmitter-receiver antenna comprises two separate antennas, one for transmission (3) and another for receiving (6), and said label transmitter-receiver antenna comprises a single antenna (5).

Claim 119. (New)

119. An electronic label reading system comprising,  
    an electronic coded label (4) having an antenna coil  
    (12) and at least one item of information, said label being  
    in proximity to a metal object (13),  
    an interrogator (1) including a transmitter coil (3)  
    and a receiver coil (6),  
    said metal object substantially screening said label  
    from the interrogator (1), and  
    said metal object (13) further includes a pathway on it  
    to allow surface currents induced by the interrogator on one  
    side of said metal object to pass to the other side and to  
    create a magnetic field (13C) exciting the label antenna  
    coil (12).

Claim 120. (New)

120. A method of obtaining information from an electronic label in proximity to a metal object that substantially screens the label from an interrogator (1) containing a transmitter coil (3) and a receiver coil (6) comprising the steps of:

producing induced surface currents (13A) on one side of the metal object by a magnetic field of the interrogator,

defining a pathway on said metal object (13) to allow the surface currents induced by the interrogator on one side of said metal object to pass to the other side and to create a magnetic field (13C) exciting the label antenna coil (12).